

**2113 - EROSION CONTROL MATERIALS**

**SECTION 2113**

**EROSION CONTROL MATERIALS**

**2113.1 DESCRIPTION**

This specification covers erosion control products manufactured from wood, straw or coconut fiber mat, synthetic mat, paper mat, jute mesh or other material that is placed on slopes or ditches for short-term or long-term protection of seeded areas.

**2113.2 REQUIREMENTS**

a. Provide prequalified erosion control materials of the class and type specified in the Contract Documents.

b. Erosion control products are categorized in **TABLE 2113-1 and 2113-2**:

<b>TABLE 2113-1: CLASS 1. "SLOPE PROTECTION</b>		
<b>Type</b>	<b>Uses</b>	<b>Soil Type</b>
Type C	Slopes > 3:1	Clay soils
Type D	Slopes > 3:1	Sandy soils

<b>TABLE 2113-2: CLASS 2 FLEXIBLE CHANNEL LINER</b>		
<b>Type</b>	<b>Duration</b>	<b>Shear Stress <math>t_a</math></b>
Type E	Short-term ( $\leq 5$ years)	up to 2 lbs/sq ft
Type F	Short-term ( $\leq 5$ years)	up to 4 lbs/sq ft
Type G	Long-term ( $> 5$ years)	up to 6 lbs/sq ft
Type H*	Long-term ( $> 5$ years)	up to 8 lbs/sq ft

\*Use Only 100% synthetic products

c. **Anchors.** Provide and use anchors as recommended by the erosion control product manufacturer. In the absence of any recommendations by the manufacturer, provide material in **TABLE 2113-3**:

<b>TABLE 2113-3: WIRE, STAPLE AND ANCHORS</b>	
<b>Property</b>	<b>minimum size</b>
<b>Slope Protection</b>	
Wire Diameter	11 gauge
Leg Length (Heavy Soil)	6 inch
Leg Length (Light Soil)	8 inch
Crown Width	1 inch
<b>Flexible Channel Liner - Wire Staple Anchors</b>	
Wire Diameter	8 gauge
Leg Length (Heavy Soil)	10 inch
Leg Length (Light Soil)	14 inch
Crown Width	2 inch
<b>Flexible Channel Liner - Metal Stake Pin Anchors</b>	
Pin Diameter	3/16 inch
Pin Length (Heavy Soil)	10 inch
Pin Length (Light Soil)	14 inch
Steel Washer Diameter	1½ inch, nominal
<b>Flexible Channel Liner - Hardwood Stake Anchors</b>	
Light Soil	1 x 3 x 12 inch
Heavy Soil	1 x 3 x 18 inch

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### **2113.3 TEST METHODS**

Erosion Control products will be tested and evaluated by the Texas Department of Transportation and the Texas Transportation Institute following procedures outlined in the Texas DOT Erosion Control Report. Anchors are evaluated on the basis of their performance in the field.

### **2113.4 PREQUALIFICATION**

Prequalification procedures may be obtained by writing to the Texas Department of Transportation, Director of Construction and Maintenance, 125 East 11<sup>th</sup> Street, Austin, TX 78701-2483. A list of prequalified materials based on the annual Texas DOT Erosion Control Report and field performance within Kansas will be maintained by the KDOT Bureau of Construction and Materials. The KDOT prequalified list establishes the acceptable materials to be incorporated into KDOT projects. Products will remain on the KDOT list provided field performance is satisfactory or the manufacturer requests the removal of their own product.

### **2113.5 BASIS OF ACCEPTANCE**

#### **a. Erosion Control Materials.**

- (1) Prequalification as required by **subsection 2113.4**.
- (2) Receipt and approval of a Type C certification as specified in **DIVISION 2600**.
- (3) Field observation before or during material installation.

**b. Anchors.** Field observation before or during installation.