American Excelsior Company®
Earth Science Division

Proud Participant in NTPEP and Proud Member of:

AEC Premier Straw® Wattle
SPECIFICATION

PART I - GENERAL

1.01 Summary

A. The straw wattle contains agricultural straw for the purpose of slowing water velocity and trapping sediment as described herein.

B. This work shall consist of furnishing and installing the straw wattle; including fine grading, installing, staking, and miscellaneous related work, in accordance with these standard specifications and at the locations identified on drawings or designated by the owner's representative. This work shall include all necessary materials, labor, supervision, and equipment for installation of a complete system.

C. All work of this section shall be performed in accordance with the conditions and requirements of the contract documents.

D. The straw wattle shall be used to slow water velocity, trap sediment, and enhance revegetation. Based on a project-by-project engineering analysis, the straw wattle shall be suitable for the following applications:

1. Slope interruption
2. Channels, Swales, and Ditches
3. Inlet and outlet protections

1.02 Performance Requirements

A. Straw wattle shall provide temporary, degradable channel and slope interruption by slowing water velocity to reduce shear stress and soil erosion while enhancing revegetation. Straw wattle performance capabilities shall be determined by large-scale testing deemed acceptable by the design engineer.

B. Straw wattle performance requirements:

Functional Longevity[a]: $\leq$ 18 months

[a] Functional Longevity varies from region to region because of differences in climatic conditions.

1.03 Submittals

A. Submittals for approval shall include complete design data, Product Netting Information, SDS, Installation Guidelines, Manufacturing Material Specifications, Manufacturing Certifications, Staking Pattern Guide, CAD details, and a Manufacturing Quality Control Program.

1.04 Delivery, Storage, and Handling

A. Straw wattle shall be furnished on pallets or master packs.

B. Straw wattle shall be of consistent density with fibers distributed evenly over the entire area of the wattle.

C. Straw wattle shall be free of defects and voids that would interfere with proper installation or impair performance.

D. Straw wattle shall be stored by the Contractor in a manner that protects them from damage by construction activities.

PART II - PRODUCTS

2.01 Straw Wattle

A. Straw wattle shall be AEC Premier Straw Wattles, as manufactured by American Excelsior Company, Arlington, TX (1-866-9FIBERS).

B. AEC Premier Straw Wattle consists of certified seed free agricultural straw inside a flexible and durable tubular netting with metal clips or knotted ends. AEC Premier Straw Wattle is designed to provide intimate contact with the soil, which prevents blowouts and undermining. AEC Premier Straw Wattle may be placed across channel bottoms, on hillslopes, or around inlet structures. AEC Premier Straw Wattle shall be manufactured in the U.S.A.

C. Straw wattle shall have the following nominal material characteristics:

PROPERTY	ENGLISH	METRIC
Product Name	9 in 12 in 20 in	22.9 cm 30.5 cm 50.8 cm
Minimum Diameter	8.5 in 11.5 in 19.0 in	21.3 cm 29.2 cm 48.3 cm
Wattle Density (± 10%)	(9 in) 4.53 lb/ft^3 (12 in) 3.82 lb/ft^3 (12 in) 4.24 lb/ft^3 (20 in) 2.75 lb/ft^3	72.62 kg/m^3 61.25 kg/m^3 67.98 kg/m^3 44.10 kg/m^3
Wattle Dimensions (W x L) (± 10%)	9 in x 25 ft 12 in x 10.0 ft 12 in x 15.0 ft 20 in x 10.0 ft	0.2290 m x 7.620 m 0.3048 m x 3.048 m 0.3048 m x 4.572 m 0.508 m x 3.048 m

2.02 Stakes

A. Stakes shall be wooden, 1 1/8 in wide x 1 1/8 in thick by a minimum of 30 in long for 9 in and 12 in AEC Premier Straw Wattles and 48 in long for 20 in AEC Premier Straw Wattle. Stakes shall not extend above the straw wattle more than 2 in.

PART III - EXECUTION

3.01 Straw Wattle Supplier Representation

A. Contractor shall coordinate with the wattle supplier for a qualified representative to be present on the job site at the start of installation to provide technical assistance as needed. Contractor shall remain solely responsible for the quality of installation.

3.02 Site Preparation

A. Before placing straw wattles, the Contractor shall certify that the subgrade has been properly compacted, graded smooth, has no depressions, voids, soft or uncompacted areas, is free from obstructions such as tree roots, protruding stones or other foreign matter, and is seeded and fertilized according to project specifications were applicable. The Contractor shall not proceed until all unsatisfactory conditions have been remedied. By beginning construction, Contractor signifies that the preceding work is in conformance with this specification.

B. Contractor shall fine grade the subgrade by hand dressing where necessary to remove local deviations.

C. No vehicular traffic shall be permitted directly on the straw wattle.

3.03 Installation

A. Straw wattle shall be installed as directed by the owner's representative in accordance to manufacturer's Installation Guidelines, Staking Pattern Guide, and CAD details. The extent of straw wattle shall be as shown on the project drawings.

B. Straw wattle should be installed to intercept water flow and collect sediment on site. They may be placed over bare soil or on top of erosion control blankets. Straw wattles are typically installed in a 2 inch trench with the ends of the wattle facing upstream.

C. They shall be secured to the subgrade by wood stakes every four lineal feet across the length of the straw wattle. The stakes shall be driven through the center of the straw wattle only and driven into the ground a minimum of 24 inches.

D. Straw wattle installed in a swale or channel bottom shall allow the installation to continue up the slopes three feet above the anticipated high water mark and perpendicular to the flow of water.

E. Spacing of straw wattle shall be such that the elevation of the bottom of the straw wattle upstream will be equal to the elevation of the top of the straw wattle downstream.

F. Straw wattle shall remain in place until fully established vegetation and root systems are present.

3.04 Quality Assurance

A. Straw wattle shall not be defective or damaged. Damaged or defective materials shall be replaced at no additional cost to the owner.

B. Product shall be manufactured in accordance to a documented Quality Control Program. At a minimum, the following procedures and documentation shall be provided upon request:
   1. Manufacturing Quality Control Program Manual
   2. Additional inspections for product conformance shall be conducted during the run after the first piece inspection.
   3. Moisture content readings recorded for each manufacturing day.
   4. Each individual straw wattle shall be inspected, weighed, and documented prior to packaging for conformance to manufacturing specifications.

3.05 Clean-up

A. At the completion of this scope of work, Contractor shall remove from the job site and properly dispose of all remaining debris, waste materials, excess materials, and equipment required of or created by Contractor. Disposal of waste materials shall be solely the responsibility of Contractor and shall be done in accordance with applicable waste disposal regulations.

3.06 Method of Measurement

A. Straw wattle shall be measured for payment as individual items and the unit of measure shall be each.

3.07 Basis of Payment

A. The accepted quantities of straw wattle shall be paid for at the contract unit price per each unit, complete in place.

Payment shall be made under:

Pay Item	**Pay Unit**
Straw wattle	Individual Item

Disclaimer: AEC Premier Straw Wattle is a system for sediment control in channels and on slopes. American Excelsior Company (AEC) believes that the information contained herein to be reliable and accurate for use in sediment control applications. However, since physical conditions vary from job site to job site and even within a given job site, AEC makes no performance guarantees and assumes no obligation or liability for the reliability or accuracy of information contained herein, for the results, safety, or suitability of using AEC Premier Straw Wattle, or for damages occurring in connection with the installation of any erosion control product whether or not made by AEC or its affiliates, except as separately and specifically made in writing by AEC. These guidelines are subject to change without notice.