



emtek®

The environmental advantage

1. Raw Materials - With responsible forest stewardship, timber becomes a renewable resource for future generations



1930s photo (left) of Anthony mill in Bearden. They were pioneers in the region for selective harvesting over clear-cutting.

emtek® mats begin in the forest. Managing our own land as a renewable resource has been a hallmark of 108 years of timber management history in the Anthony family. Today, Anthony Hardwood Composites manufactures the *emtek*® mat utilizing residual hardwood resources from processing. Material science research and engineering link the forest to a low impact access solution, fostered by a commitment to the forest lifecycle and the impact on our environment.

2. Environmental Responsibility doesn't end with mat construction –

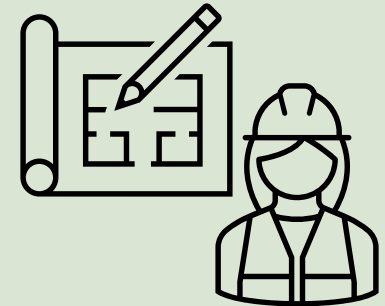
Providing a technical report on the performance of matting before construction occurs can aid regulatory agencies in mitigating environmental impact



A permit for work in wetland requires a return to pre-construction contours



*Project owner communicates expectations to meet permitting e.g. **“No rutting more than 6 inches”***



*Access company provides plan that meets stated expectations**

*There exist methodologies and standards within the engineering community for predicting impact of matting on site. Such analysis is critical for more technical access, in which there is a need to verify that matting will meet expectations for regulatory agencies, and ultimately protect sensitive sites from irreversible changes to flow, vegetation and elevations.

Materials with tested and published properties

allow *engineers* to

use established **mathematical** models to design systems with predictable behavior,

giving *regulatory officials*

the ability to apply **metrics** and limits to the anticipated impact to the environment of a particular construction project

and the *public*

the **control** of consequence.

235k 235k

28'

16,640 lb
area
32" x 24"
x 10'

WHEEL
≤ 55.9k

$$I' = \frac{bt^3}{12} = 36,8$$

$$A' = bt = 768 \text{ IN}^2$$

$$S' = \frac{bt^2}{6} = 3,072 \text{ IN}^3$$

$$- 32.28 \left(\frac{0.835}{2} \right)^2$$

FT

k ⊥ span
32.07k-ft

$$\frac{WL^2}{8}$$

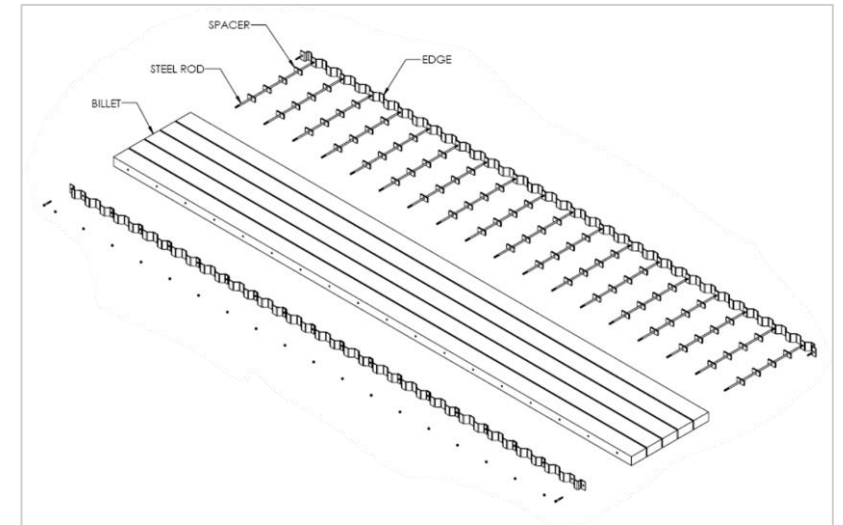
EMTEK as a product does this very well because of the specific **modulus of resilience** designed into the composite structure and the **flexibility of large geometry**.



Periodic assessment and product development in lab



In-plant routine load testing for quality control



Patented technology on it's 5th iteration of design

Tested and published material values

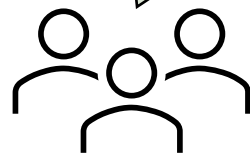


Open the door to engineering.

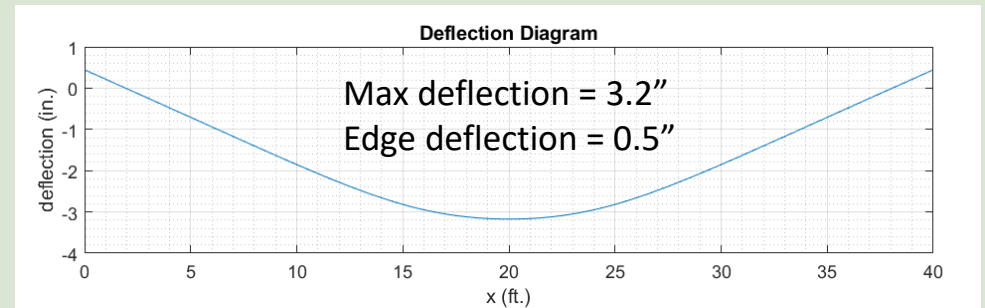
emtek[®] can provide the material properties of the product, which allows engineers to reliably predict the behavior of the material on site, providing insight on

- ✓ Deflection of mat under load
- ✓ Bearing pressure on soil
- ✓ Stress on material

Can you provide calculations showing rutting no more than 6 inches? – project owner



Calculations run for a 40' long *emtek*[®] panel, given the provided loading conditions and site characteristics.



Design metrics for performance and impact



Aid conversations with regulatory and environmental

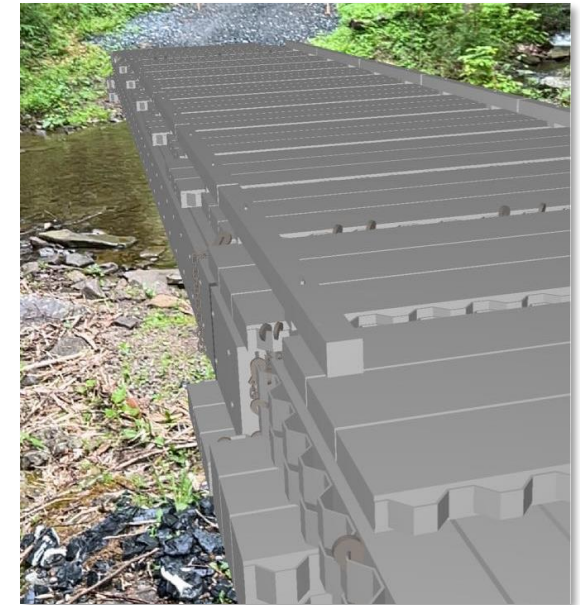
emtek[®] values innovation and learning. We rely on our connections with experts in the professional engineering and science communities to aid us in bettering our systems and design tools, so that we can minimize environmental impact and risk.



Audits to compare actual impact to predicted design values



*Technical Presentation at Society of Wetland Scientists Conference
(Engaging with experts)*



Adopting new tools for streamlining design conversations on site