

WATCHING THE GRASS GROW

Indiana DOT tries a new method of vegetation

By J. Kevin Loucks



The hydraulic growth medium was sprayed directly onto troubled areas with no tilling or soil preparation.

Indiana faces a state-wide challenge of growing grass on finished highway construction projects. In many areas around the state, grass establishment is difficult due to poor topsoil. The topsoil in these areas has high pH (8.5 and higher), very low phosphorous and very high calcium, making sustained grass growth a challenge. Reclamation can be difficult, often requiring offsite compost or topsoil, which can be costly. Also, it can be difficult for contractors to achieve the vegetation results required to obtain a Note of Termination. The Indiana Department of Transportation (INDOT) issues a Note of Termination when it feels the contractors have fulfilled their responsibilities. When it comes to reclamation, this means 70% grass coverage (plant density). Most of this process is visual. Contractors cannot be paid for a project until the Note of Termination has been issued.

Construction Fabrics & Grids (CF&G) of Indianapolis and Organic Earth Industries (OEI) of Fort Collins, Colo., began working on a plan to address this problem.

Finding a Solution

After confirming previous plant growth issues and the OEI-recommended plan with Aaron Patton of Purdue University's Turfgrass Science Department, work began. Chad Crimmins, president of CF&G, contacted INDOT and proposed a plan of using hydraulic growth medium and mulch technology for long-term grass establishment. Hydraulic growth medium and

mulch products can eliminate the need for offsite compost or topsoil, help save money and provide solid results.

INDOT accepted the proposal and found a suitable site for the test. The work began with CF&G taking soil samples and a sample analysis conducted by A&L Great Lakes Laboratories Inc. in Fort Wayne, Ind. Based on the results, OEI formulated a treatment plan for the project.

On May 19, 2014, the median of U.S. Highway 31/State Route 38 near Westfield, Ind., was chosen as a test site. This was an INDOT interchange project where grass growth had been inconsistent after three (or in some cases more) standard hydroseeding applications.

The median area had been sprayed several times with standard hydroseeding practices with poor results. Slusser's Green Thumb applied Earth Essence Delta HGM2 (hydraulic growth medium and mulch) with a Finn T300 Hydroseeder (a 3,000-gal hydroseeder) at a rate of approximately 110 bales (50 lb each) per acre, for a total of 5,500 lb per acre. Slusser's Green Thumb sprayed the medium directly onto troubled areas with no tilling or soil preparation. The standard seed mix (R-Mix) for Indiana state projects was used.

A New Way

Earth Essence products contain hydraulic growth mediums, plant root growth enhancers, soil builders and erosion control technology. Requiring only 55 gal of water per bale of mulch, the medium allows contractors to cover more area before refilling the hydroseeder tank. This technology builds topsoil in place while controlling erosion, replacing the standard practice of spreading topsoil or compost and covering it with a blanket, straw or hydraulic mulch.

The hydraulic growth medium and mulch was developed by engineers and soil scientists and contains U.S. Composting Council Seal of Test Assurance-approved compost, mycorrhizae, peat, an engineered mixture of organic fibers, and other constituents for building topsoil and controlling erosion. With a C-Factor of 0.006, it controls

erosion like a bonded fiber matrix mulch and grows grass better than compost.

Meeting Requirements

The treated areas on this site began with very sparse vegetation. Earth Essence Delta was able to produce good results when compared with standard hydroseeding technology. This type of technology

can offer contractors a cost-effective option for meeting Note of Termination requirements on highway projects. **SWS**

J. Kevin Loucks, engineer, is president and CEO of Organic Earth Industries Inc. Loucks can be reached at kevin.loucks@organicearthindustries.com or 970.227.9661.



GLOBALLY ACCEPTED. PROVEN PERFORMANCE.

- 100 Year Service Life
- Water-Tight Joint Performance
- AASHTO, AREMA, FAA, ASTM & CSA Specifications
- Documented Use Under Heavy Cyclical Loads

LOWER INSTALLED COSTS. GREATER EFFICIENCIES.

- Lightweight, Longer Pipe Lengths
- Less Labor & Equipment for Installations
- Supports Green Building or Sustainability Credits on Projects



THE VOICE OF AN INDUSTRY

To see why corrugated plastic pipe is the best choice visit:

www.plasticpipe.org/drainage

© 2015 PLASTICS PIPE INSTITUTE