Mr. William Williams  
Texas A&M Transportation Institute (TTI)  
3135 TAMU  
College Station, Texas  77843  

Dear Mr. Williams:  

This letter is in response to your request for the Federal Highway Administration (FHWA) to review a roadside safety system for eligibility for reimbursement under the Federal-aid highway program.

- Name of system: Gravix Barrier/Retaining Wall System  
- Type of system: Longitudinal Barrier  
- Test Level: AASHTO MASH TL4  
- Testing conducted by: Texas A&M Transportation Institute (TTI)  
- Task Force 13 Designator: SGR50  
- Date of request: December 23, 2013  
- Date of completed package: March 18, 2014  

**Decision:**  
The following device is eligible, with details provided in the form which is attached as an integral part of this letter:  
- Gravix Barrier/Retaining Wall System  

Based on a review of crash test results you submitted certifying the device described herein meets the crash test and evaluation criteria of the American Association of State Highway and Transportation Officials' Manual for Assessing Safety Hardware (MASH), the device is eligible for reimbursement under the Federal-aid highway program. Eligibility for reimbursement under the Federal-aid highway program does not establish approval or endorsement by the FHWA for any particular purpose or use.

The FHWA, the Department of Transportation, and the United States Government do not endorse products or services and the issuance of a reimbursement eligibility letter is not an endorsement of any product or service.
Requirements
To be found eligible for Federal-aid funding, roadside safety devices should meet the crash test and evaluation criteria contained in the American Association of State Highway and Transportation Officials' Manual for Assessing Safety Hardware (MASH).

Description
The device and supporting documentation are described in the attached form.

Summary and Standard Provisions
Therefore, the system described and detailed in the attached form is eligible for reimbursement and may be installed under the range of conditions tested. Please note the following standard provisions that apply to FHWA eligibility letters:

- This letter provides a AASHTO/ARTBA/AGC Task Force 13 designator that should be used for the purpose of the creation of a new and/or the update of existing Task Force 13 drawing for posting on the on-line 'Guide to Standardized Highway Barrier Hardware' currently referenced in AASHTO Roadside Design Guide.
- This finding of eligibility does not cover other structural features of the systems, nor conformity with the Manual on Uniform Traffic Control Devices.
- Any changes that may influence system conformance with MASH will require a new reimbursement eligibility letter.
- Should the FHWA discover that the qualification testing was flawed, that in-service performance reveals safety problems, or that the system is significantly different from the version that was crash tested, we reserve the right to modify or revoke this letter.
- You are expected to supply potential users with sufficient information on design and installation requirements to ensure proper performance.
- You are expected to certify to potential users that the hardware furnished has the same chemistry, mechanical properties, and geometry as that submitted for review, and that it will meet the test and evaluation criteria of the MASH.
- To prevent misunderstanding by others, this letter of eligibility is designated as number B-249 and shall not be reproduced except in full. This letter and the test documentation upon which it is based are public information. All such letters and documentation may be reviewed at our office upon request.
• This letter shall not be construed as authorization or consent by the FHWA to use, manufacture, or sell any patented system for which the applicant is not the patent holder. The FHWA does not become involved in issues concerning patent law. Patent issues, if any, are to be resolved by the applicant.

Sincerely yours,

Michael S. Griffith
Director, Office of Safety Technologies
Office of Safety

Enclosures
Request for Federal Aid Reimbursement Eligibility
Of Highway Safety Hardware

<table>
<thead>
<tr>
<th>Date of Request:</th>
<th>December 20, 2013</th>
<th>System Type</th>
<th>New Hardware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>William Williams</td>
<td>Testing Type</td>
<td>Physical Crash Testing</td>
</tr>
<tr>
<td>Company:</td>
<td>Texas A&amp;M Transportatio n Institute</td>
<td>Device Name / Variant</td>
<td>Gravix Barrier/Retaining Wall System</td>
</tr>
<tr>
<td>Address:</td>
<td>3135 TAMU, College Station, Texas 77843-3135</td>
<td>Testing Criterion</td>
<td>AASHTO MASH</td>
</tr>
<tr>
<td>Country:</td>
<td>United States</td>
<td>Test Level</td>
<td>TL4</td>
</tr>
<tr>
<td>To:</td>
<td>Michael S. Griffith, Director FHWA, Office of Safety Technologies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I request the following devices be considered eligible for reimbursement under the Federal-aid highway program.

### CRASH TESTING

A brief description of each crash test and its result:

<table>
<thead>
<tr>
<th>Required Test Number</th>
<th>Narrative Description</th>
<th>Evaluation Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-10 (1100C)</td>
<td>Did not perform Test 4-10 based on prior testing</td>
<td>WAIVER REQUESTED</td>
</tr>
<tr>
<td>4-11 (2270P)</td>
<td>Did not perform Test 4-11 based on prior testing</td>
<td>WAIVER REQUESTED</td>
</tr>
</tbody>
</table>

Identification of the individual or organization responsible for the product:

- Contact Name: Thomas Rainey
- Company Name: Earth Wall Products
- Address: 1427 Walcutt's Way, Marietta, GA 30064
- Country: United States of America
<table>
<thead>
<tr>
<th>Required Test Number</th>
<th>Narrative Description</th>
<th>Evaluation Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-12 (36000V)</td>
<td>MASH TEST 4-12 (Single Unit Truck) was performed on Gravix Barrier System</td>
<td>PASS</td>
</tr>
<tr>
<td>4-20 (1100C)</td>
<td>4-21 (2270P)</td>
<td></td>
</tr>
<tr>
<td>4-22 (10000S)</td>
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<td></td>
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</tbody>
</table>

Full Scale Crash Testing was done in compliance with MASH by the following accredited crash test laboratory (cite the laboratory's accreditation status as noted in the crash test reports.):

<table>
<thead>
<tr>
<th>Laboratory Name:</th>
<th>Texas Transportation Institute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Contact:</td>
<td>William Williams, P.E. Same as Submitter</td>
</tr>
<tr>
<td>Address:</td>
<td>Texas A&amp;M Transportation Institute, 3135 TAMU, College Station, Texas 77843-3135 Same as Submitter</td>
</tr>
<tr>
<td>Country:</td>
<td>United States of America Same as Submitter</td>
</tr>
<tr>
<td>Accreditation Certificate Number and Date:</td>
<td>A2LA Certificate Number: 2821.01, Valid to April 30, 2015</td>
</tr>
</tbody>
</table>

**ATTACHMENTS**

Attach to this form:

1) A copy of the full test report, video, and a Test Data Summary Sheet for each test conducted in support of this request.
2) A drawing or drawings of the device(s) that conform to the Task Force-13 Drawing Specifications [Hardware Guide Drawing Standards]. For proprietary products, a single isometric line drawing is usually acceptable to illustrate the product, with detailed specifications, intended use, and contact information provided on the reverse. Additional drawings (not in TF-13 format) showing details that are key to understanding the performance of the device should also be submitted to facilitate our review.

**FHWA Official Business Only:**

<table>
<thead>
<tr>
<th>Eligibility Letter</th>
<th>AASHTO TF13</th>
<th>Key Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Date</td>
<td>Designator</td>
</tr>
<tr>
<td>B-249</td>
<td>March 19, 2014</td>
<td>SGR50</td>
</tr>
</tbody>
</table>
Figure 5.7. Summary of Results for MASH Test 4-12 on Gravix Impact Wall.
GRAVIX TL-4 BARRIER UNIT

EARTH WALL PRODUCTS

SHEET NO. DATE
1 of 4 2013-12-16
CONCRETE STRENGTH: 5000 psi
UNIT WEIGHT: 10,200 LBS. APPROX.

FOR ADDITIONAL INFO, PLEASE SEE FINAL DRAWINGS FROM EARTH WALL PRODUCTS
www.earthwallproducts.com

FINISHED PAVEMENT SURFACE

SIDE VIEW

2012

GRAVIX TL-4 BARRIER UNIT

GRAVIX
DOT Precast Wall System

EARTH WALL PRODUCTS