

## Bauske, Shelly A.

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**From:** Karey Reynolds <kreynolds@emi-ash.com>  
**Sent:** Wednesday, March 27, 2013 2:39 PM  
**To:** Bauske, Shelly A.  
**Subject:** RE: Variance Request Information  
**Attachments:** Application for Deviation to ND Code 031313.docx; BMS-BMC 7011 Deep Pier 56446.pdf

Please find attached our request for variance from the North Dakota code Sections 69-10-02- 09, paragraph 2 (approach length) and 69-10-02-05.1 (clearance under the I-beams) for our new scale installed at Environmental Materials, 373 102X Ave SW, Killdeer ND, 58640. If you require any other information, or the request submitted in any other format, please let me know.

Thank You,

**Karey Reynolds**  
Killdeer Operations Manager



ENVIRONMENTAL  
MATERIALS, INC.  
ENVIRONMENTAL MATERIALS, INC.  
a Weave Management Group Company  
2348 N. FRONTAGE RD.  
BILLINGS, MT 59101  
P.O BOX 22745  
BILLINGS, MT 59104  
[www.emi-ash.com](http://www.emi-ash.com)

O: 701-572-5007 | M: 406-697-3585 | F: 701-572-5017 | Email: [kreynolds@emi-ash.com](mailto:kreynolds@emi-ash.com)

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**From:** Bauske, Shelly A. [<mailto:sbauske@nd.gov>]  
**Sent:** Tuesday, March 12, 2013 3:43 PM  
**To:** Karey Reynolds  
**Subject:** Variance Request Information

Per our conversation, attached are the links to the North Dakota Administrative Code sections pertaining to variance permit requests, fixed pitless scales, and deck lengths.

If you have any questions, please contact me.

Thank you.

Variance Permit Requests (69-10-01-04.1):

<http://www.legis.nd.gov/information/acdata/pdf/69-10-01.pdf?20130312164015>

Fixed Pitless Scales (69-10-02-05.1)

Deck Lengths (69-10-02-09)

<http://www.legis.nd.gov/information/acdata/pdf/69-10-02.pdf?20130312164106>

Shelly Bauske

Public Service Commission

600 E Boulevard Ave Dept 408

Bismarck ND 58505-0480

701-328-4070

701-328-2410 (fax)

[sbauske@nd.gov](mailto:sbauske@nd.gov)

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March 27, 2013

To: Shelly Bauske  
North Dakota Public Service Commission  
600 E. Boulevard Avenue  
Bismarck, ND 58505-0480

From: Karey Reynolds  
Environmental Materials Inc.  
373 102x Avenue SW  
Killdeer, ND 58640

Reference: Scale Test Report for Avery Weigh-Tronix BridgeMont Truck Scale, 70ft L x 10ft W installed at the above address, serial number 8745; 120,000lbs capacity.

Dear Ms. Bauske:

The purpose of my letter is to respectfully request a variance from the North Dakota code Sections 69-10-02-09, paragraph 2 (approach length) and 69-10-02-05.1 (clearance under the I-beams) for our new scale installed at the above address. The scale has been installed in accordance with Avery Weigh-Tronix Engineering drawing #56465-0018 (attached) and although it does not follow the exact details of the North Dakota code, it does meet the requirements of NIST Handbook 44 for construction of the approach ramp minimums and material type. We do not feel these deviations, coupled with our mandatory cleaning and inspection procedures will have a detrimental effect on the long-term performance of our scale.

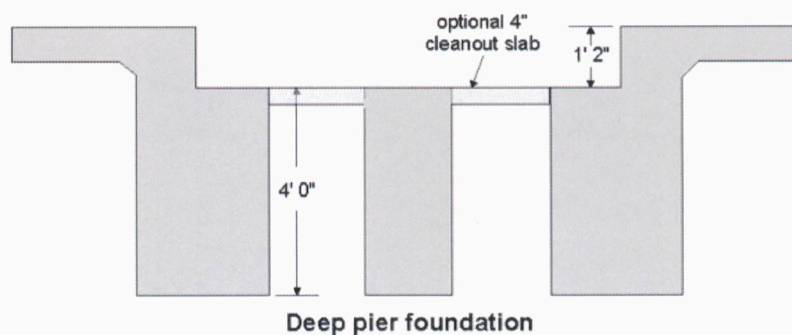
When constructing the ramps and pier elevation we were faced with ground and access clearance conditions that did not allow normal mounting of the scale. We also did not realize there was requirement for a 12ft linear ramp and it would be very difficult, expensive and disruptive to our ongoing operations to lengthen the ramps. Any lengthening would shut down our operation for the time necessary to rebuild the ramps and allow curing time. We constructed the additional approach to the concrete ramps from Class 3 Road Base material that achieves a compressive strength in excess of 3,000psi. We feel this will give the ramps and approaches long term viability.

The clearance under the scale of the so called "washout slab" was made from concrete and sloped to one side, thus allowing gravitational drainage and ease of cleaning. This particular design of scale (Avery Weigh-Tronix BridgeMont) does not have any protruding structure or exposed I-Beams, lever arms or pivots and bearings that are typical in older scale designs and would trap and cause accumulations of debris. The entire area under the scale is sealed by a metal pan (the manufacturer calls this "sandwich" construction thus eliminating any possibility of build-up. Under full load this scale only deflects 5/8" at mid-span of a module (each module being approximately 23ft long). Movement of the entire structure laterally is no more the 5/8" and is internally checked at 4 places within the eight (8) load cell stands.

There are no so called “bumper bolts” at each end of the scale that bang against the end walls and require frequent adjustment. Deflection of the load cell under full load is no more than .0030” unlike the very active “live” structures contained in I-beam, pivot, bearing and transfer beam scales from other manufacturers. Also, the load cells are contained in an easily accessible compartment with removable covers for ease of cleaning. We will regularly inspect and clean these areas per the manufacturer and scale service company’s recommendations to ensure long-term, accurate performance. By following a regular, semi-annual cleaning procedure (attached) we feel this process will ensure uninterrupted and accurate performance of the scale. For reference, our piers were constructed to extend 6” below the frost line to prevent heaving and are a total height of 48”.

As noted in your test report #WG58263, the scale is performing well within required tolerances and is expected to continue so for the life of the structure. Your acceptance of the deviations noted would be sincerely appreciated. A few structural details are contained below-

Below are a few details of the construction of the scale for your review-



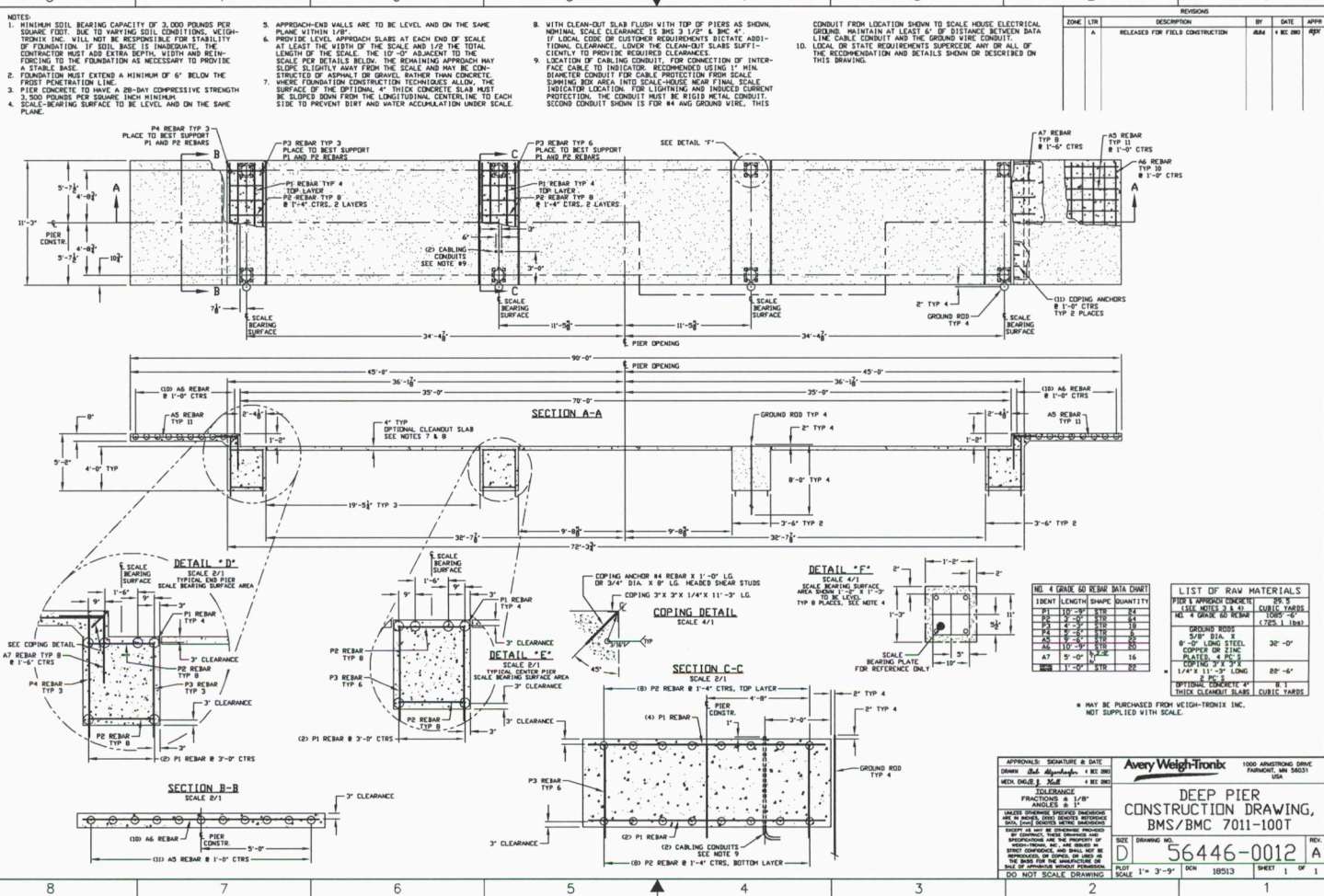
Cover plate removed over the load cell area for easy access and cleaning.



Cover Plates removed on both sides of one section.

Respectfully submitted,

Karey Reynolds  
Operations Manager,  
Environmental Materials Inc.



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