



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE  
GOVERNOR

EUGENE A. CONTI, JR.  
SECRETARY

May 19, 2011

Thomas Taylor, P.E.  
T&B Structural Systems, LLC  
6800 Manhattan Boulevard  
Suite 304  
Fort Worth, TX 76120

Subject: Approval of T&B’s Stabilized Earth Wall System

Dear Mr. Taylor:

The Geotechnical Engineering Unit (GEU) has reviewed the renewal submittal dated January 4, 2011 for T&B’s Stabilized Earth Wall (SEW) System in accordance with the “NCDOT Policy for Mechanically Stabilized Earth Retaining Walls” and the GEU Standard Mechanically Stabilized Earth (MSE) Retaining Walls Provision. In addition to the January 4<sup>th</sup> submittal, an SEW panel submittal dated November 4, 2010 and several subsequent revised design calculations were received. Based on this information, T&B’s SEW system is approved for use on North Carolina Department of Transportation (NCDOT) projects in accordance with the MSE wall policy and standard provision. This policy and provision may be obtained from:

<http://www.ncdot.org/doh/preconstruct/highway/geotech/msewalls/>

For your reference, the approved steel reinforcements and corresponding design parameters to be used for future NCDOT MSE wall design submittals are listed in the table below.

MSEW INPUT VALUES FOR TBSS SOIL REINFORCING PARAMETERS												
Reinforcement	Fy (ksi)	b (in)	A: (in <sup>2</sup> )	Rc	F* <sub>top</sub>	F* <sub>20</sub>	α	Long Size	Tran Size	Long Space	Tran Space	Width
Type - 1	65.00	18	0.274	0.30	1.25	0.624	1.00	W11.0	W11.0	6 in.	6 in.	18 in.
Type - 2	65.00	18	0.274	0.30	0.524	0.312	1.00	W11.0	W11.0	6 in.	12 in.	18 in.
Type - 3	65.00	18	0.403	0.30	0.416	0.208	1.00	W15.0	W11.0	6 in.	18 in.	18 in.
Type - 4	65.00	18	0.569	0.30	0.312	0.156	1.00	W20.0	W11.0	6 in.	24 in.	18 in.
Type - 5	65.00	30	0.854	0.50	0.312	0.156	1.00	W20.0	W11.0	6 in.	24 in.	30 in.

Note: Area is based on 100 year design life per AASHTO corrosion model.

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[www.ncdot.gov/doh/preconstruct/highway/geotech](http://www.ncdot.gov/doh/preconstruct/highway/geotech)

**LOCATION:**  
CENTURY CENTER COMPLEX  
ENTRANCE B-2  
1020 BIRCH RIDGE DRIVE  
RALEIGH NC 27610

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Also, T&B alignment and connection pins and panel anchors are required and defined as miscellaneous components in accordance with the GEU standard MSE wall provision.

If you have any questions, I can be reached at (919) 707-6850.

Sincerely,



Njoroge W. Wainaina  
State Geotechnical Engineer

cc: K. J. Kim, Ph.D., P.E., Eastern Regional Geotechnical Manager (w/ submittal)  
John Pilipchuk, L.G., P.E., Western Regional Geotechnical Manager (w/ submittal)  
Mohammed Mulla, P.E., Geotechnical Contracts & Statewide Services Manager (w/ submittal)  
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