



2009 - 2010

October Meeting Notice

Minnesota Geotechnical Society

**The Use of Steel Sheet Pile as Permanent Foundation
and Retention Systems**

Chad A. Underwood, P.E., P.G., Engineering Partners International LLC

Engineering Partners International LLC has designed permanent steel sheet pile foundations for buildings with one to two levels of below grade parking and up to five above grade floor levels. Both the below grade parking slabs and the perimeter walls and columns of the superstructure are supported by the sheet pile foundation. Uniform wall loads in the range of 5 to 12 kips per linear foot and point loads of up to 251 kips have been supported by the sheet pile, in addition to typical lateral earth pressures and surcharge loads.

Design of the sheet pile for earth retention follows conventional design methodology, with special attention to each stage of construction. The evaluation of vertical bearing capacity of the sheet pile foundations is based on conventional analyses for friction piles, with field verification using high strain dynamic testing with a Pile Driving Analyzer (PDA). The structural capacity of the sheet pile considers combined axial loading and/or eccentric loading due to uniform wall loads and point loads, and bending moments due to the unbalanced earth pressure.

Date: Wednesday, October 14, 2009

Location: Rose Vine Hall (downstairs at Grumpy's Bar & Grill)
2801 Snelling Ave. N., Roseville, MN

Time: 6:00 Social Hour, Sponsored by Engineering Partners International LLC

7:00 Dinner & Dessert: Salad, Rolls, Coffee/Soda and a choice of:

1. 10-Ounce Top Sirloin - Char-grilled and topped with bleu cheese garlic butter. Served with white cheddar mashed potatoes and a sautéed vegetable medley
2. Feta Cheese and Sun-Dried Tomato Stuffed Walleye - Served over white cheddar mashed potatoes with a drizzle of lemon thyme butter sauce.
3. Seared Chicken Parmesan - Tender chicken breast crusted with aged Parmesan cheese and rapidly seared until golden brown. Served over white cheddar mashed potatoes and a sautéed vegetable medley.
4. Manicotti – Fresh Pasta tubes filled with ricotta, mozzarella and parmesan cheeses. Baked in marinara sauce and finished with melted mozzarella.

8:00 Presentation – Chad A. Underwood, P.E., P.G., Engineering Partners International LLC
(One professional development hour toward continuing education requirements for Professional Engineers is available).

Cost: \$25.00 members, \$30.00 non-members, and \$5.00 Full-time students, payable to MGS at the door.

Reservations: Requested by 12 Noon, Friday, October 9, 2009

Please register via the website at <http://www.mngeotechnicalsociety.com/eventsmpls.asp>

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