1015-35-167 **Monica Torres*** (torres@math.purdue.edu). *Normal traces and Gauss-Green formula for weakly differentiable vector fields.*

We obtain the normal trace of bounded divergence measure fields on the boundary of any set of finite perimeter E as the limit of the normal traces of the vector field F on smooth surfaces that approximate ∂E essentially from the inside of E with respect to the measure div F. Using this trace, we obtain the corresponding Gauss-Green formula. (Received February 03, 2006)