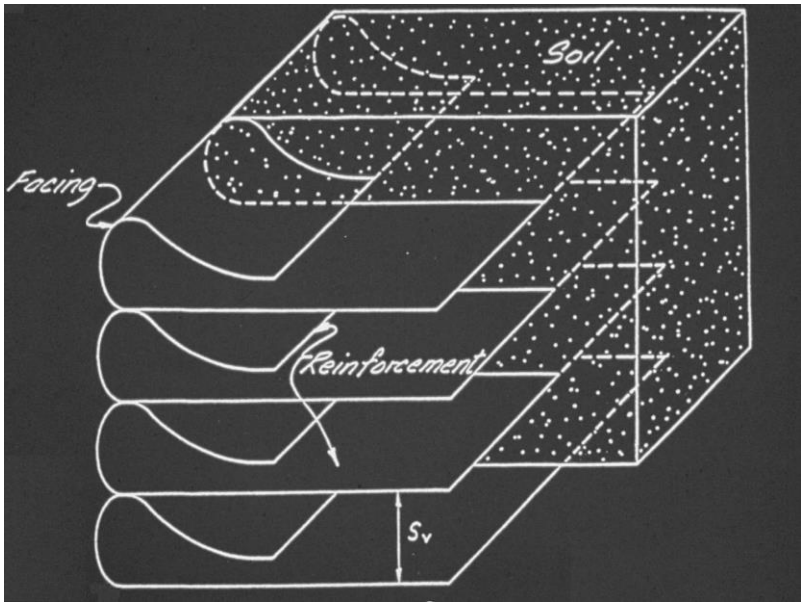
Geotextile wrapped-face wall



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First geotextile wrapped-face wall
(Rouen, France 1971)

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The first geosynthetic reinforced soil wall was constructed in France in 1970 near Poitiers (polyester strap)

The second geosynthetic reinforced soil wall was also constructed in France in 1971 at Rouen (first geotextile wrapped-face wall)

The third geosynthetic reinforced soil wall in the world and first in North America was built by the US Forest Service in Siskyou National Forest, Oregon in 1974 (wrapped-face wall)

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First geotextile wrapped-face wall in North America (Snailback Wall)
(United States Forest Service, Oregon, 1974)

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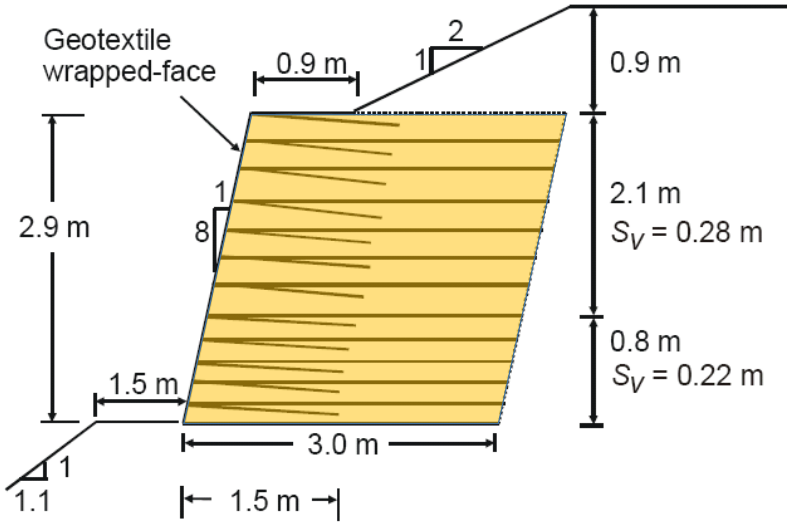
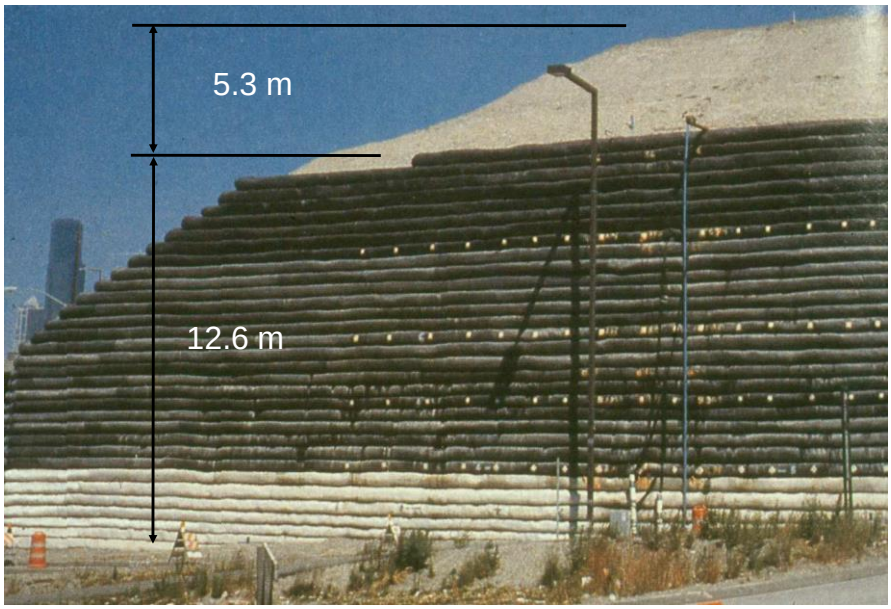
Leshchinsky B, Berg R, Liew W, Kawakami-Selin M, Moore J, Brown S, Kleutsch B, Glover-Cutter K, Wayne M. 2020. Characterization of geogrid mechanical and chemical properties from a thirty-six year old mechanically-stabilized earth wall. Geotextiles and Geomembranes. 48(6): 793-801.



Allen, T.M., Bathurst, R.J., and Berg, R.R. 2002.

Rainier Avenue Wrapped-Face Geotextile Wall (Seattle, Washington, 1989)



LRT, Calgary, Alberta, Canada (~ 1995)

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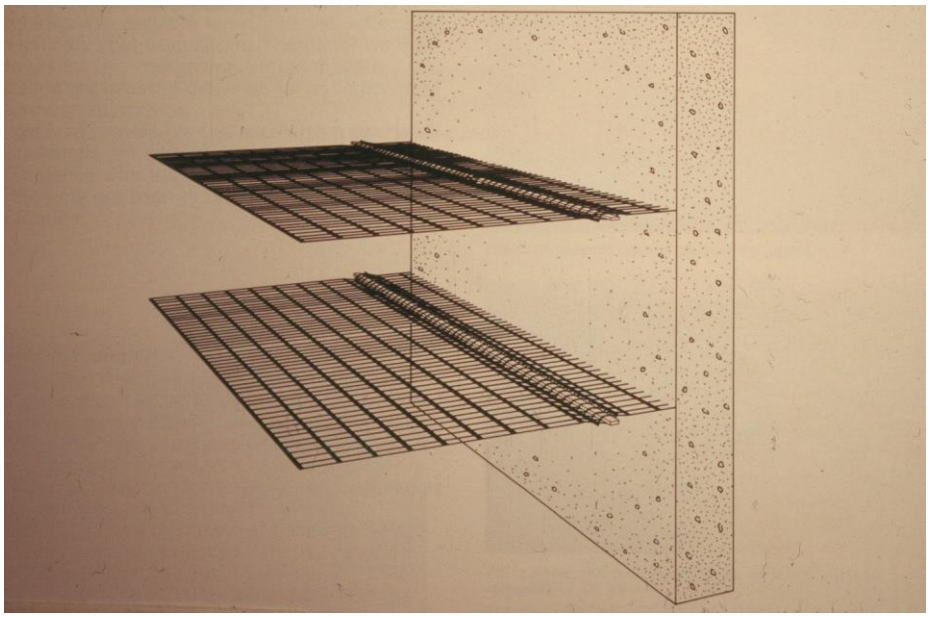

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Construction of Highbury Avenue propped panel wall – London, Ontario Canada (Bathurst 1993)

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Construction of Highbury Avenue propped panel wall – London, Ontario Canada (Bathurst 1993)

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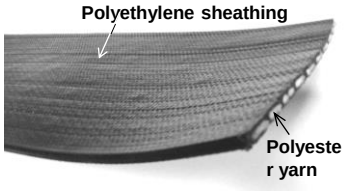

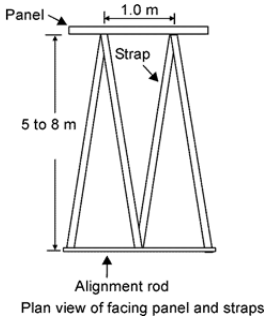

Polyester strap reinforcement

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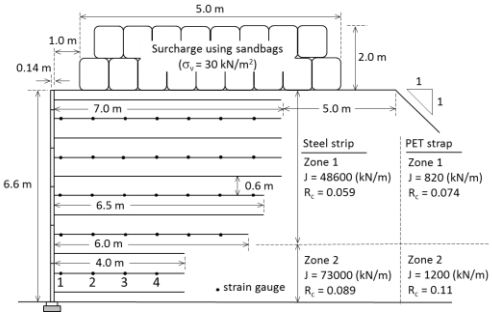
Polyester strap reinforcement



In-situ connection test

Miyata, Y., Bathurst, R.J. and Allen, T.M. 2018. **Evaluation of tensile load model accuracy for PET strap MSE walls.** *Geosynthetics International* 25(6): 656-671

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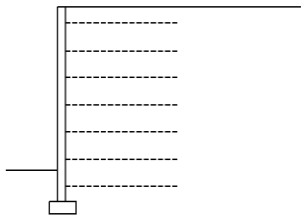
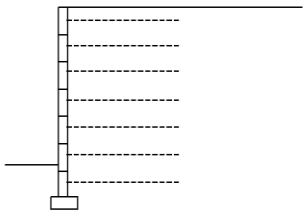
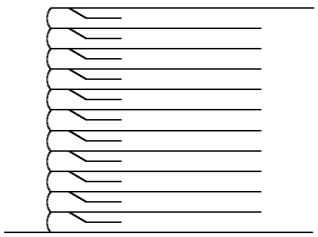
Example MSE wall facing types



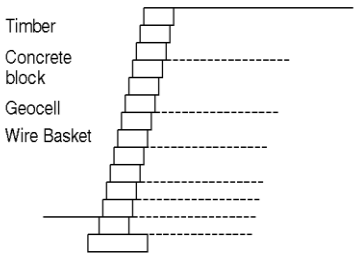
PROPPED PANEL FACING



INCREMENTAL PANEL FACING



WRAP–AROUND FACING



MODULAR WALL

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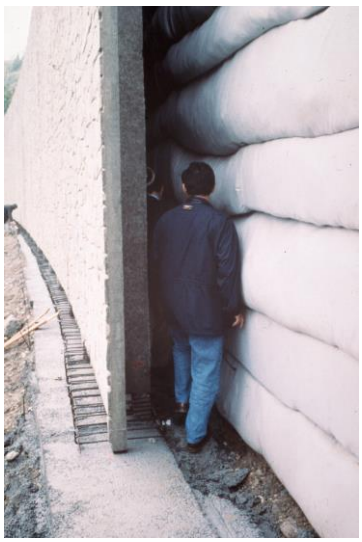
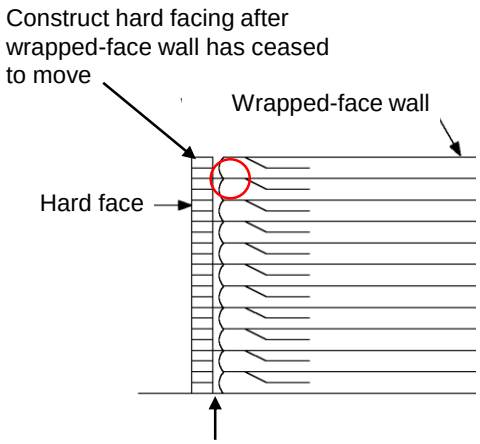
Hybrid MSE walls





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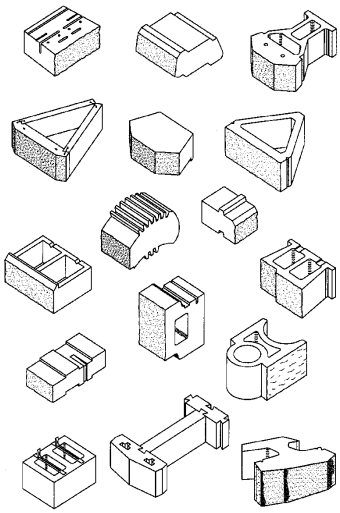
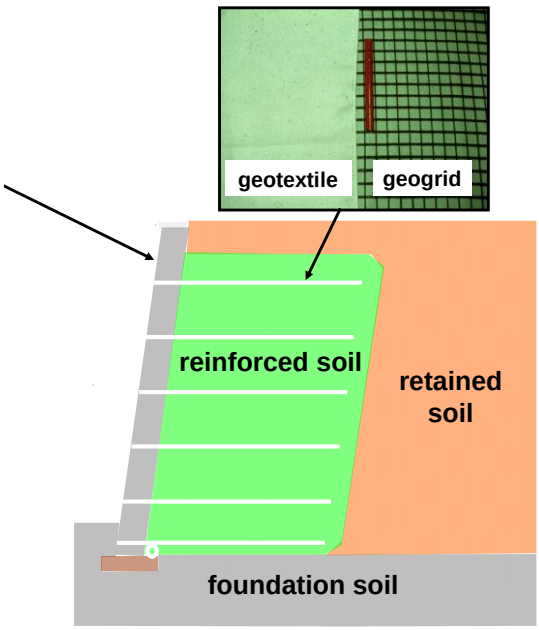
Modular block units



Example masonry units
(Bathurst and Simac 1994)

Geosynthetic reinforcement



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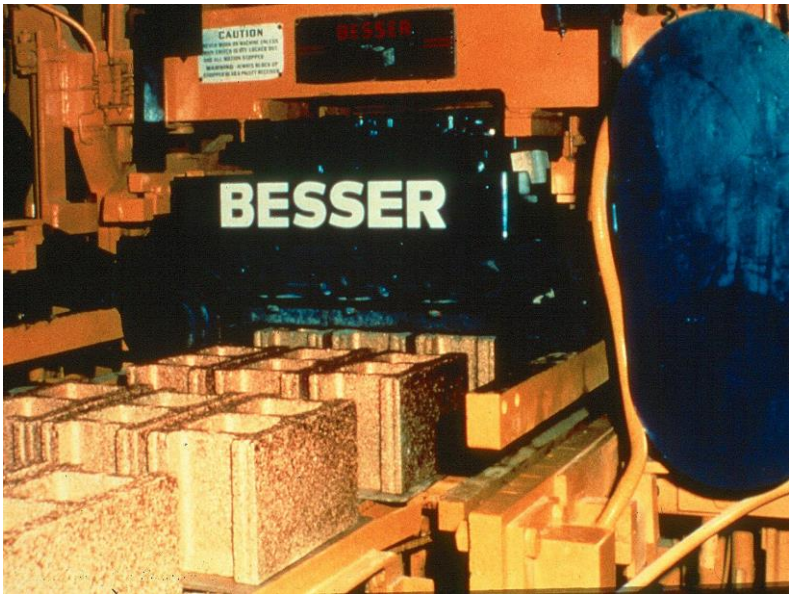
Masonry concrete blocks



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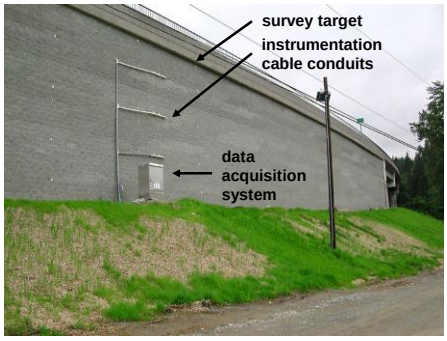

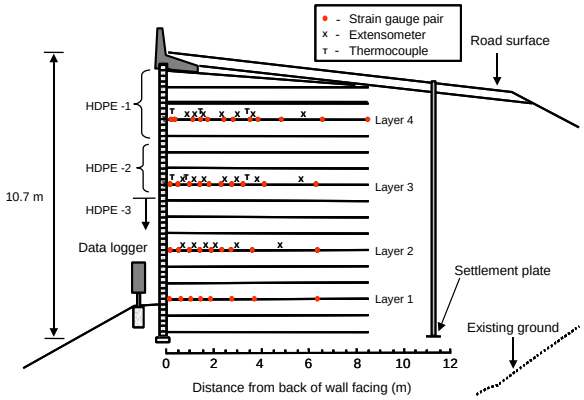

Wall C: Highway SR-18, Maple Valley, Washington, USA (Allen and Bathurst 2006)

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Why are MSE walls popular?

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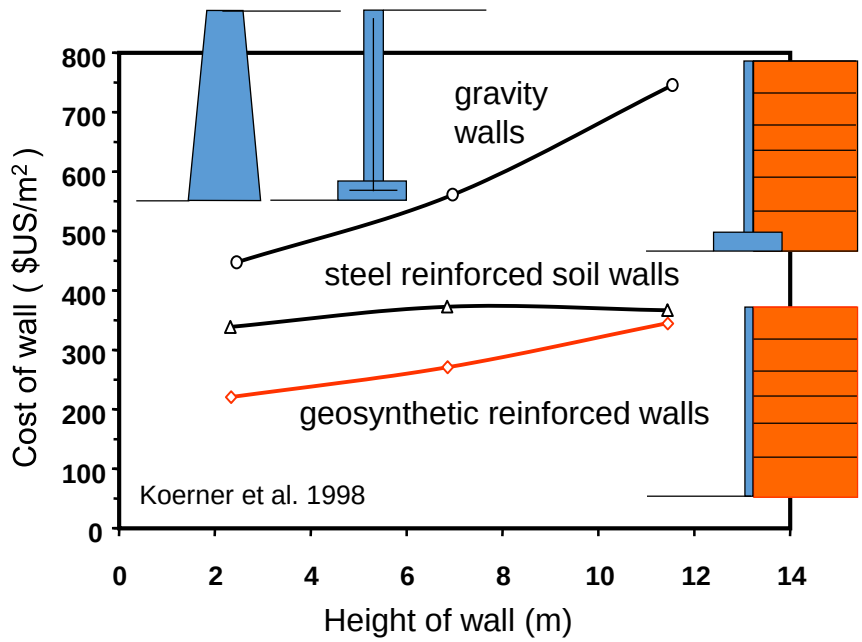

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